



*Better Buildings Residential Network  
Peer Exchange Call Series*

*Transition: Office to Multi-Family Building Conversions and Efficiency*

*October 26, 2023*

# Agenda and Ground Rules

- Moderator
  - **Jonathan Cohen**, Better Buildings Residential Network, U.S. DOE Residential Buildings Integration Program (RBI)
- Agenda Review and Ground Rules
- Residential Network Overview and Upcoming Call Schedule
- Opening Poll
- Featured Speakers
  - **Kera Package**, U.S. Department of Housing and Urban Development
  - **Robert Fuller**, Gensler
- Open Discussion
- Closing Poll and Announcements

## Ground Rules:

1. **Sales of services and commercial messages are not appropriate** during Peer Exchange Calls.
2. Calls are a safe place for discussion; **please do not attribute information to individuals** on the call.

*The views expressed by speakers are their own, and do not reflect those of the Dept. of Energy.*

## Join the Network

### Member Benefits:

- Recognition in media, social media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- One-on-One brainstorming conversations

### Commitment:

- Members only need to provide *one number*: their organization's number of residential energy upgrades per year, or equivalent.

### Upcoming Calls (2<sup>nd</sup> & 4<sup>th</sup> Thursdays):

- *11/09: Residential Storage – An Essential Piece of the Climate Puzzle*
- *12/14: The Potential of Whole-Home Lighting Systems and Low-Voltage Homes*

Peer Exchange Call summaries are posted on the Better Buildings [website](#) a few weeks after the call



**Kera Package**

***Office of Community Planning and Development  
U.S. Department of Housing and Urban Development***



# **Adaptive Reuse: Conversion of Commercial Properties to Residential Uses and Mixed-Use Development**

**Kera Package** | Chief of Staff  
HUD's Office of Community Planning and Development



# What is Adaptive Reuse?

- **An Opportunity:**
  - Office occupancy rates declined from 95 percent at the end of February 2020 to 10 percent at the end of March 2020, when COVID-19 lockdowns went into effect, rebounding only to 47 percent by the end of November 2022 and 50.3 percent at the start of June 2023. [*Kastle Systems*]
  - ~15% of office buildings in the commercial districts of the 105 largest cities in the U.S. are physically suitable for conversion. [*National Bureau of Economic Research*]
  - White House convened an interagency working group to support the conversion of commercial properties to housing, and leverage climate-focused federal resources to create zero emissions and affordable units.
- **Characteristics of adaptive reuse**, according to a recent report by researchers at the Turner Center for Housing Innovation:
  - 1) existence of a structure to be reused
  - 2) functional and/or economic obsolescence of the existing building
  - 3) change of use
  - 4) economic viability of the new project.

# Why Adaptive Reuse?

- **Economic Development:**
  - ❖ Cities are experiencing an increase in office vacancies and a shortage in housing.
  - ❖ Revitalizes communities, especially downtown and economic cores.
  - ❖ Creates more workforce housing close to transportation and job centers.
  - ❖ Helps small businesses by bringing more activity to retail, restaurants, and amenities.
- **Cost Savings:**
  - ❖ Shorter development timeline – especially if local policies provide flexibilities / incentives.
  - ❖ May save in construction costs, depending on the condition of the property.
- **Community Building:**
  - ❖ New life for historic properties, preserving community significance and architecture.
  - ❖ Placemaking by bringing resources to disinvested areas with high commercial vacancies.
- **Climate:**
  - ❖ Conversions reduce demolition waste and emissions related to new construction
  - ❖ Conversions also provide an opportunity to improve energy efficiency and reduce carbon footprint of a property.

# Is Adaptive Reuse an Effective Strategy?

- **Los Angeles:** created over 12,000 units downtown through their Adaptive Reuse Program since 1999.
- **New York City:** created 12,300 units through a past incentive program and has created a taskforce to look at the future of conversions.
- **Cleveland:** created over 5,000 units through conversions across 36 properties since 1970.
- **Kansas City:** created over 5,000 units through adaptive reuse through mostly office conversions.
- **Baltimore:** in 2022 alone, added 400 new apartments through office-to-residential conversions.
- **Chicago:** creating 1,655 units through the LaSalle Street Reimagined initiative.
- **California:** Repurposed hotel rooms through Project Homekey – at least 4,000 new units.



Light Apartments | Baltimore  
40 units, rooftop solar panels

*Photo credit: 2 West Photography*



# How can HUD funding support adaptive reuse / conversions?

- ☐ Acquisition
- ☐ Rehabilitation
- ☐ Predevelopment Costs
- ☐ Infrastructure
- ☐ Economic Development
- ☐ Mixed-Use Development
- ☐ Rental Assistance
- ☐ Supportive Services (PSH)

- **Formula Grant Funding:**
  - ❖ Community Development Block Grants
  - ❖ HOME Investment Partnerships
  - ❖ HOME – American Rescue Plan
  - ❖ Housing Trust Fund
- **Section 108 Loan Guarantee**
- **Competitive Grant Funding:**
  - ❖ Choice Neighborhoods
  - ❖ Pathways to Removing Obstacles to Housing
  - ❖ Permanent Supportive Housing through Homeless Assistance Grants
- **Mortgage Insurance:**
  - ❖ Section 221(d)(4): Mortgage Insurance for Rental and Cooperative Housing
  - ❖ FHA Section 220: Mortgage Insurance for Rental Housing for Urban Renewal and Concentrated Development Areas
- **Technical Assistance**



## Hattiesburg, Mississippi

Vacant High School → Preservation Crossing

74 Units for low-income seniors

Public Funding Sources		AMOUNT
National Affordable Housing Trust Fund		\$500,000
FIHOP* CRA Credits (via MHC)		\$1,075,000
<b>PUBLIC FUNDING TOTAL</b>		<b>\$1,575,000</b>
Private Funding Sources		AMOUNT
LIHTC		\$10,041,783
State Tax Credits State Historic Tax Credits		\$2,700,797
Deferred Developer Fee		\$1,170,546
Cash From Operations		\$96,441
<b>PRIVATE FUNDING TOTAL</b>		<b>\$14,009,567</b>
<b>TOTAL COMBINED FUNDING AMOUNT</b>		<b>\$15,584,567</b>



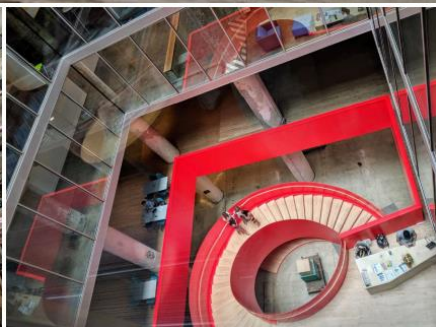
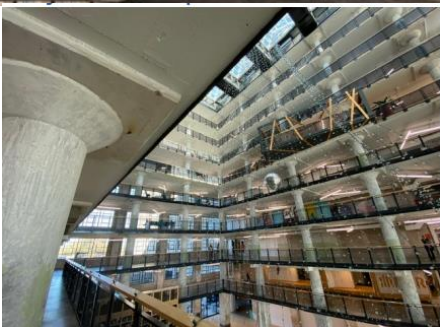


Photo Source: Section 108 Case Study

## Memphis, Tennessee

Distribution Center → Crosstown Concourse

260 Units, School, YMCA

SOURCES <sup>1</sup> :		USES:	
New Market Equity	\$ 16,700,000	Acquisition	\$7,000,000
History Tax Equity	36,000,000	Hard Costs	104,000,000
Sponsor Equity	31,000,000	Tenant Improvements	50,000,000
Delta Regional Authority Grant	250,000	Other Hard Costs	5,300,000
Section 108 Loan	4,000,000	Soft Costs	22,600,000
BEDI Grant	2,000,000	Financing and Fees	12,500,000
Qualified Energy	8,150,000	Reserves	3,600,000
Conservation Bonds City Capital			
Improvement Program	2,900,000	<b>TOTAL</b>	<b>\$ 98,100,000</b>
Shelby County	5,000,000		
Mezzanine Loan	12,500,000		
Senior Loan	86,500,000		
<b>TOTAL</b>	<b>\$ 205,000,000</b>		



*Photo credit: Village of St. John, HUD Exchange*

## Wilmington, Delaware

Vacant Church → Village of St. John

53 units (5 HOME-assisted units) for low- to moderate- income seniors, homeless individuals, and persons with disabilities

Funding Sources	Cost
HOME Investment	\$300,000
LIHTC (if applicable)	\$8,401,638
Other Federal Funds	\$1,908,799
Other Public Funds	\$8,858,751
Private Funds	\$3,358,435
<b>Total Project Costs</b>	<b>\$22,827,623</b>





*Photo credit: City of Texarkana*



## Texarkana, Texas

Grim Hotel → Grim Lofts

98 units, mixed-use, mixed-income

- \$26 million in funding, including \$1.4 million in Section 108 funding, EPA Brownfields Assessment Grants, EPA revolving Loan Fund, and state and federal historic tax credits.



## For more information:

- **HUD Exchange**

- More information on HUD funding sources and eligible uses.
- <https://www.hudexchange.info/>

- **PD&R Evidence Matters**

- Fall 2023 publication focuses on commercial-to-residential conversions.
- <https://www.huduser.gov/portal/evidence.html>

- **Build for the Future Funding Navigator**

- List of funding opportunities under the Inflation Reduction Act (IRA), Bipartisan Infrastructure Law (BIL), and others across federal agencies to support efforts to enhance climate resiliency, energy efficiency, renewable energy integration, healthy housing, workforce development and environmental justice in HUD supported communities, programs and properties.
- <https://www.hudexchange.info/programs/build-for-the-future/funding-navigator/>





**Robert Fuller**  
*Gensler*

# OFFICE TO RESIDENTIAL CONVERSION

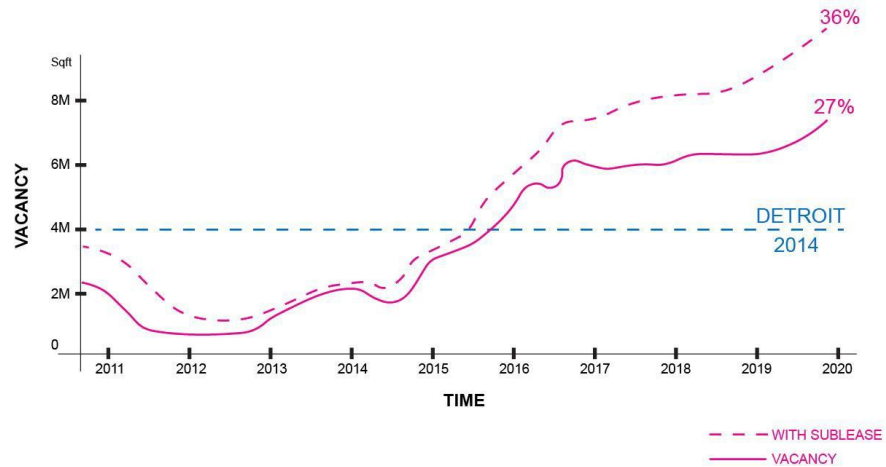
A Methodology for Quickly  
Assessing a Building's  
Suitability for Conversion

Gensler





# OFFICE VACANCY IN CALGARY



# CONVERSION SCORING CRITERIA

Gensler



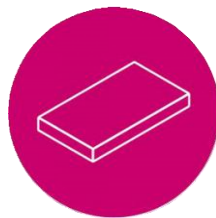
**Site Context**

**10%**



**Building Form**

**30%**



**Floor Plate**

**30%**



**Envelope**

**10%**



**Servicing**

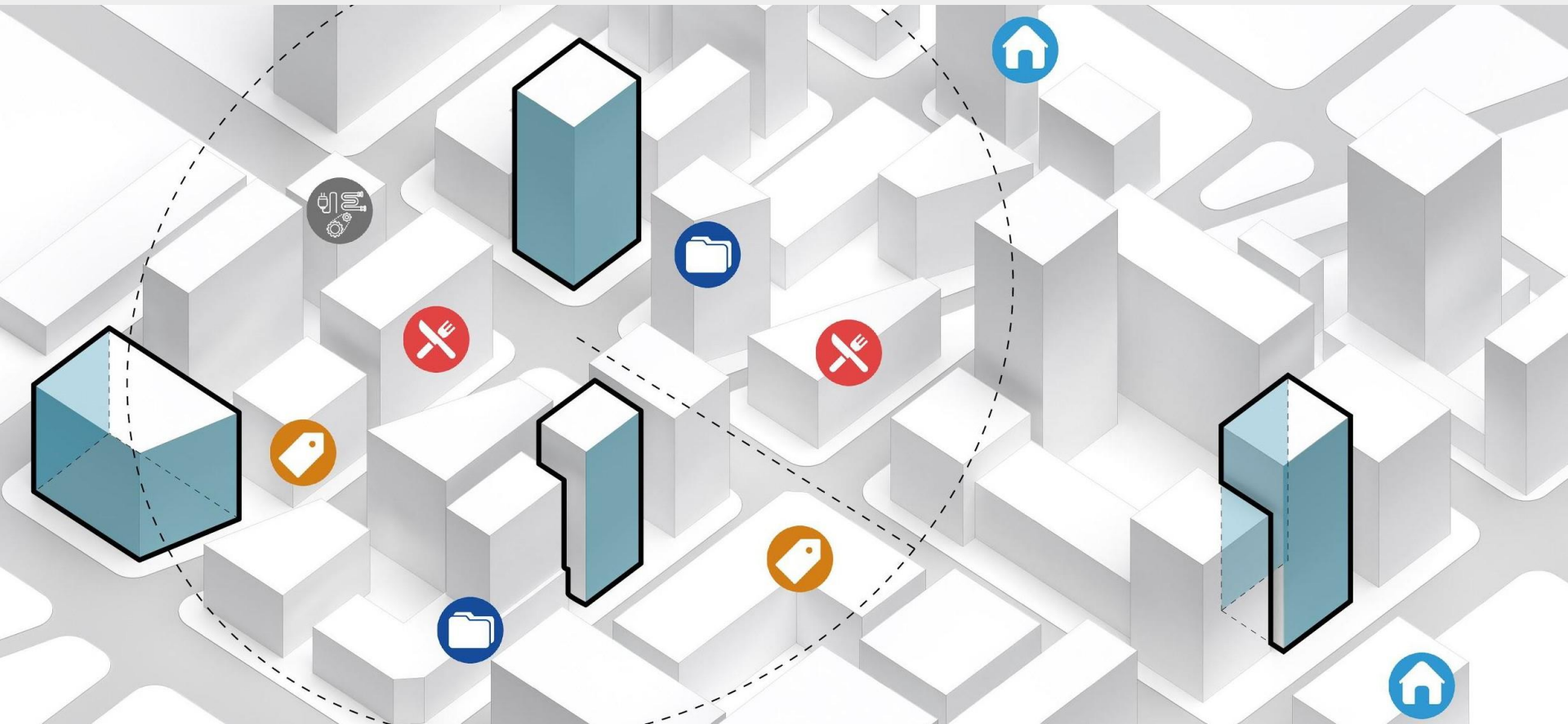
**20%**



# Site Context & Position

- Walkability
- Transit
- Natural light and views

Gensler

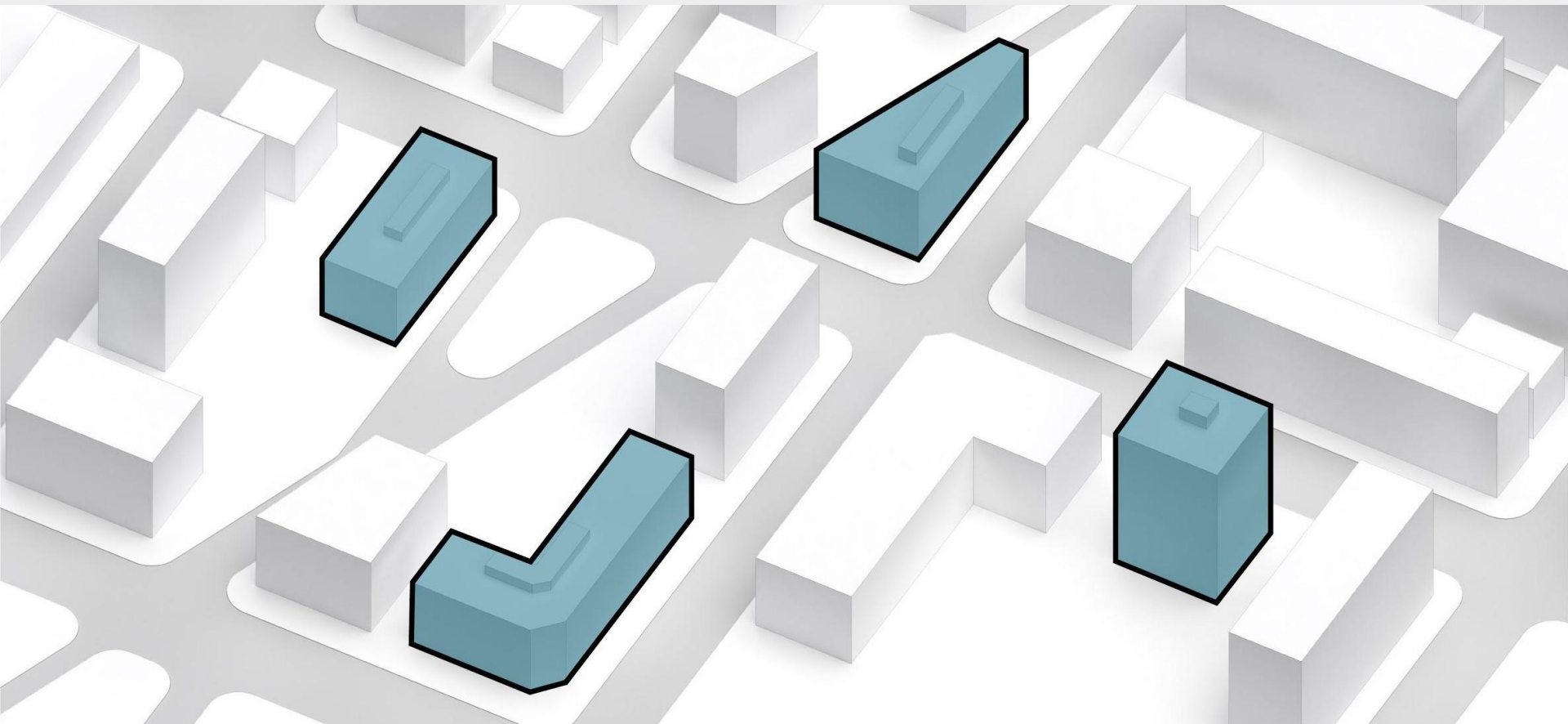




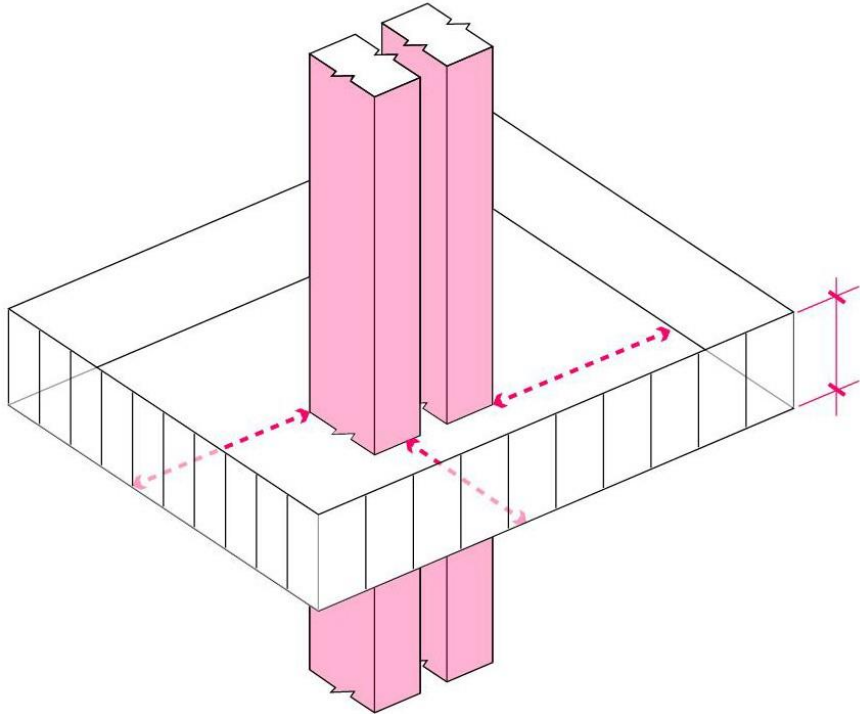
# Building Form

- Shape of Building
- How easy is it to plan units

Gensler

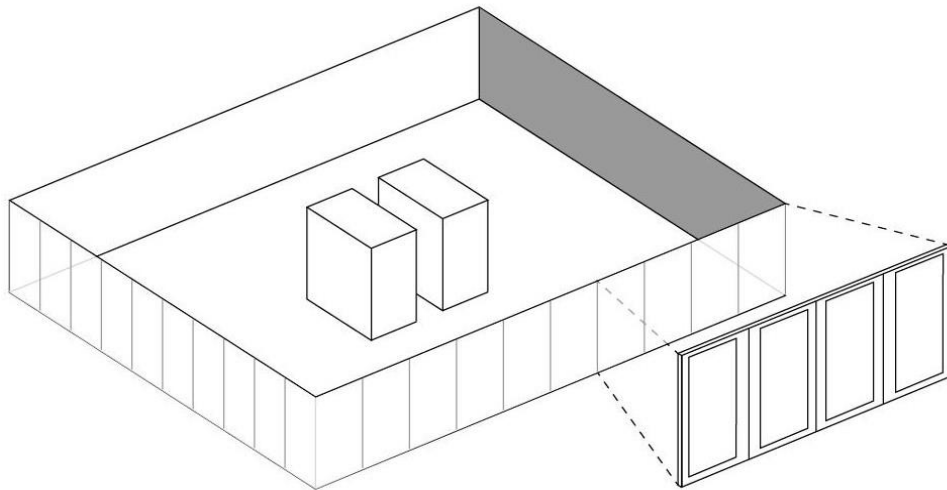






## Floor Plate And Core

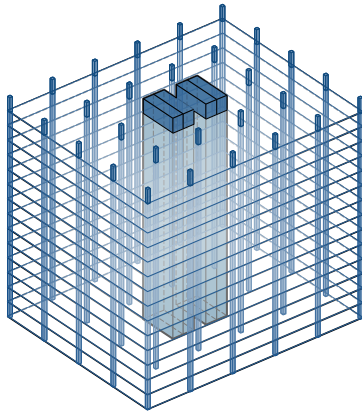
- Window to core distance
- Floorplate size
- Floor to floor height
- Number of elevators



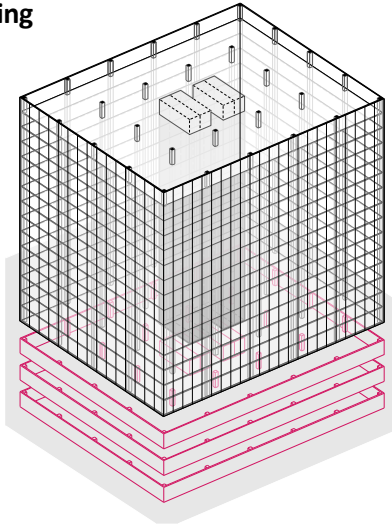
## Envelope & Windows

- Sides with window
- Window-to-wall ratio
- Ease of window replacement

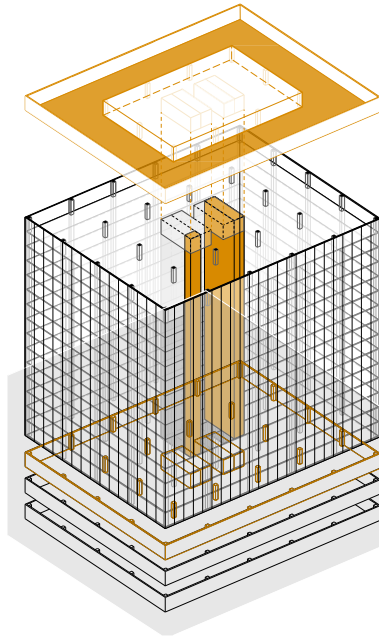
**Structural**



**Parking**



**MEP**



# Servicing

- Loading
- Parking
- Structure
- MEP

## THE INPUT

# Gensler

Office Building to Residential  
Compatibility Assessment

The name and photo associated with your Google account will be recorded when you upload files and submit this form.

\*Required

Name of landlord/developer \*

Your answer

Name of Broker:

Your answer

Project Name \*

Your answer

Address of building (123 King Street West) \*

Your answer

City 

Your answer

[illegible]

## All Project Summary

Pick landlord name to filter by landlord. Uncheck to view all.

Name of landlord/developer

### Map of Properties



### Ranked Compatibility by Project

Project Name	Compatibility	Floor Plate	Form	Services	Context	Envelope
1. Life Plaza	86%	8	10	6	8	8
2. Aquitaine Tower	86%	8	10	5	9	8
3. Bantrel Tower	85%	8	10	5	9	8
4. Guinness House/Elv...	84%	9	10	5	9	6
5. Canadian Centre	83%	7	10	5	9	8
6. Western Union Bul...	82%	7	10	6	9	8
7. Roslyn Building	81%	8	10	6	9	6
8. McFarlane Tower	81%	7	10	5	9	8
9. Asia Pacific Centre	81%	8	10	5	9	6
10. Eau Claire Place 1	81%	8	10	6	9	6

1 - 10 / 25 < >

## Project Scorecard

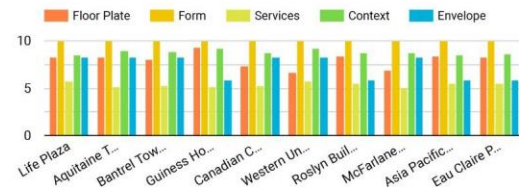
Pick a project from drop down to view project specific summary.

Project Name

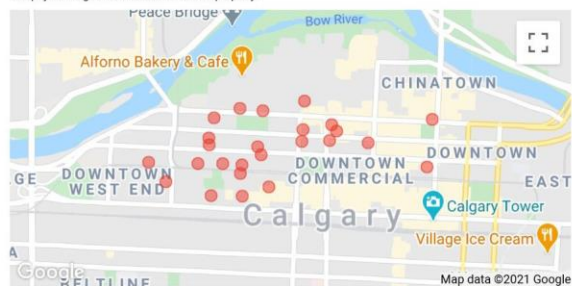
### Compatibility

77%

Landlord	Vacancy Rate	Convertible Area (SF)
Berezan	69.03%	282,200

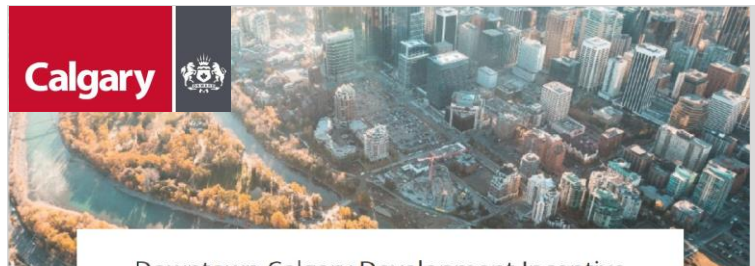


Drop "yellow figure" to view street view of property.





# THE RESULTS



## Downtown Calgary Development Incentive Program

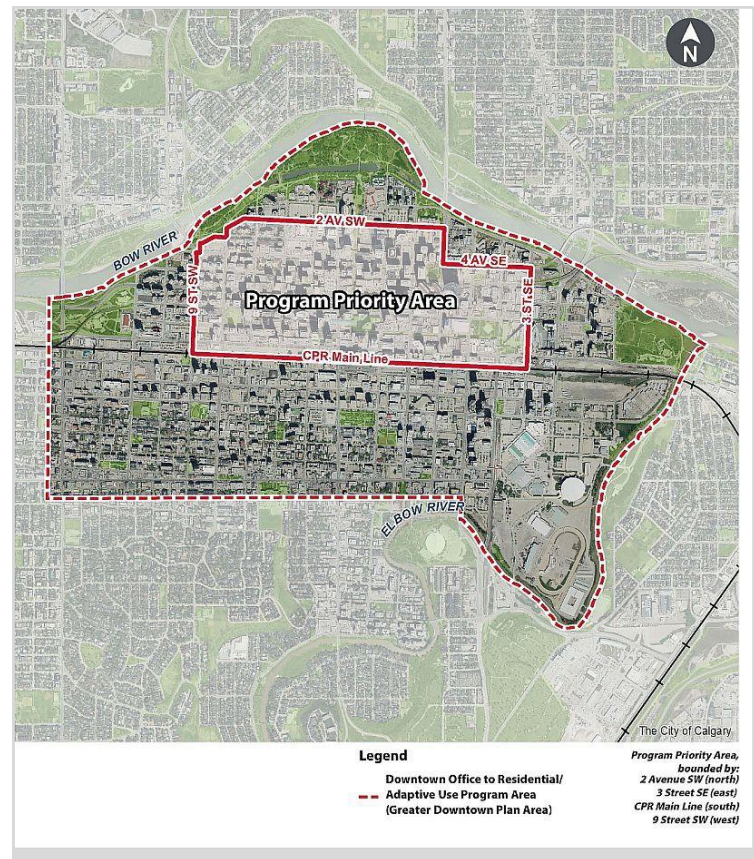
The Downtown Calgary Incentive Program is a cornerstone of The City's [Downtown Strategy](#) and a major driver of the vision and goals of Calgary's [Greater Downtown](#)

### Grant details

The program offers a grant for office to residential conversions of **\$75 per square foot**, based on the original gross building area of existing office space that will be converted.

Grants are available up to a maximum of \$15 million per property under Administration approval - any requests in excess of \$15 million require Council approval for a particular application.

The following information must be included in an application.



# MAKING WAVES

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## Decluttering and new façades revitalize aging commercial buildings

WALLACE IMMEN

SPECIAL TO THE GLOBE AND MAIL  
PUBLISHED 1 DAY AGO

0 COMMENTS

Bloomberg

Live Now Markets Industries Technology Politics Wealth Pursuits Opinion Businessweek Equality Green CityLab Crypto



### New York City's Empty Offices Reveal a Global Property Dilemma

The rise of remote work will hurt older buildings, leaving landlords in the lurch

CITYLAB

## Imagining a Second Manhattan's Empty Offices

As workers stay home and office buildings sit empty, New York City's business district — as well as cities around the world — face a global property dilemma.

Patrick Sisson

November 2, 2020, 11:26 AM EST

SHARE THIS ARTICLE

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Post

Email

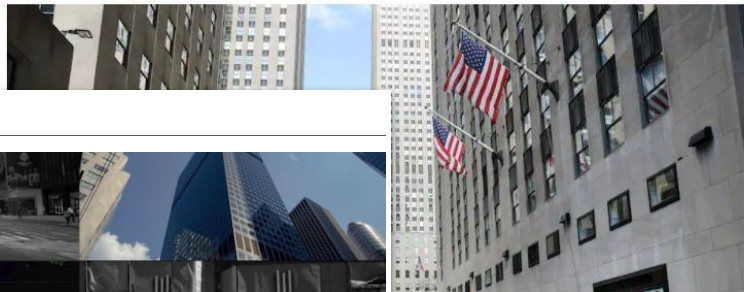
Midtown Manhattan, a dense grid of office towers normally pulsing with activity, has been called a "ghost town" so many times that you'd expect to see tumbleweeds rolling through Bryant Park. Back in July, the *New York Times* declared that the commercial district was in a "purgatorial phase zero" of reopening, painting an evocative scene of a food cart vendor scanning empty streets for signs of life. Months later, things have not

LIVE ON BLOOMBERG  
Watch Live TV >  
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tableau

Real Estate

## Following pandemic, converting office buildings into housing may become new 'normal'



## Future proofing: Upgrade fading offices or convert them to residential?

WALLACE IMMEN

SPECIAL TO THE GLOBE AND MAIL

PUBLISHED AUGUST 4, 2020

PUBLISHED AUGUST 4, 2020

This article was published more than 6 months ago. Some information in it may no longer be current.

1 COMMENTS

SHARE

TEXT SIZE

BOOKMARK



TRENDING

1 What can and can't you do after your first COVID-19 vaccine dose

2 A look at Canadians' domestic and international travel prospects for this summer

3 OPINION  
Are these the stock market returns of a lifetime?

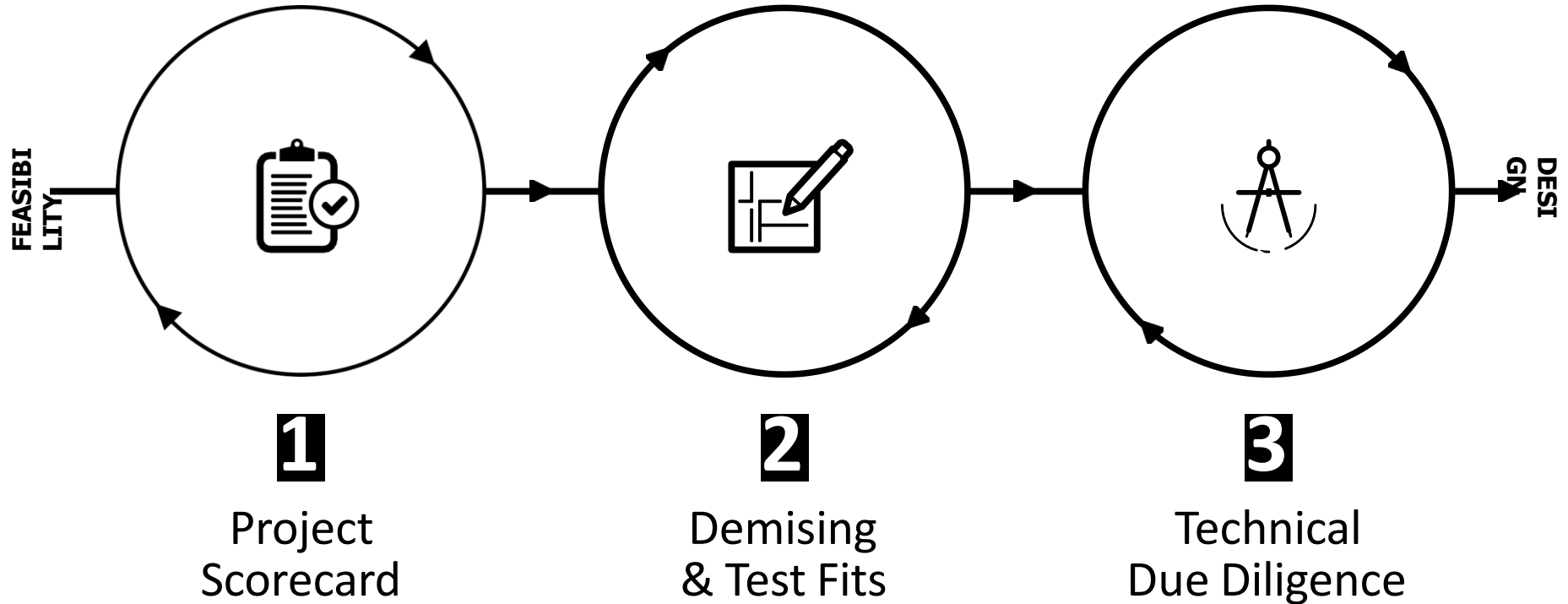
ROB CARRICK

4 Confusion over rollout persists days after Ontario pledged to vaccinate all adults in COVID hot spots

5 Wednesday's Insider Report:  
Chairman cashes out \$4-million from this stock that's rallied 760% in the past year

# PHASED ANALYTICAL APPROACH

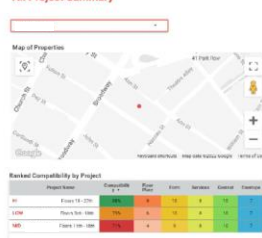
Gensler





# 1 Project Scorecard

## Gensler OFFICE to RESIDENTIAL Contact Us All Project Summary



### Definitions:

**Compatibility:** Average compatibility rate of all projects assessed. For all data results, please refer to individual recovery assessments.

- Generally, projects that score above 50% are considered good candidates, and all data is based on the further study on an individual basis in tables.
- Project 100 - 27th: Score: 70% and 50% are generally good candidates, and all data is based on the further study on an individual basis in tables.
- Project 100 - 27th: Score: 70% and 50% are generally good candidates, and all data is based on the further study on an individual basis in tables.

**Vacancy Rate:** Average vacancy rate of all projects assessed. For all data results, please refer to individual recovery assessments.

**Convertible Area:** Total convertible area of all projects assessed. For all data results, please refer to individual recovery assessments.

**ROI Savings:** ROI Savings for all projects assessed. For all data results, please refer to individual recovery assessments.

## 11th - 18th Floor | COMPATIBILITY ASSESSMENT

Owner: Built: 1930 Building: 100 West Ave. 100 West Ave. 100 West Ave.

- ADDITIONAL**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- BUILDING FORM**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- NEW/RENOVATE**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- CONTEXT**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- PLANNING**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.



**AVAILABLE ELEMENTS:** 10 Passenger + 1 Freight + 1 Freight

**Notes:** The building floor plan is shown in a simplified manner. The building floor plan is shown in a simplified manner. The building floor plan is shown in a simplified manner.

**Project Scorecard**

Compatibility: 71%

Score: 617,440

Notes: 7,137,463

Comments: 7,137,463

Feedback: 7,137,463

## 3rd - 10th Floor | COMPATIBILITY ASSESSMENT

Owner: Built: 1930 Building: 100 West Ave. 100 West Ave. 100 West Ave.

- ADDITIONAL**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- BUILDING FORM**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- NEW/RENOVATE**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- CONTEXT**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- PLANNING**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.



**AVAILABLE ELEMENTS:** 10 Passenger + 1 Freight + 1 Freight

**Notes:** The building floor plan is shown in a simplified manner. The building floor plan is shown in a simplified manner. The building floor plan is shown in a simplified manner.

**Project Scorecard**

Compatibility: 79%

Score: 617,440

Notes: 7,137,463

Comments: 7,137,463

Feedback: 7,137,463

## 19th - 27th Floor | COMPATIBILITY ASSESSMENT

Owner: Built: 1930 Building: 100 West Ave. 100 West Ave. 100 West Ave.

- ADDITIONAL**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- BUILDING FORM**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- NEW/RENOVATE**
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
  - 100 West Ave. 100 West Ave. 100 West Ave.
- CONTEXT**
  - 100 West Ave. 100 West Ave. 100 West Ave.
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- PLANNING**
  - 100 West Ave. 100 West Ave. 100 West Ave.
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  - 100 West Ave. 100 West Ave. 100 West Ave.



**AVAILABLE ELEMENTS:** 10 Passenger + 1 Freight + 1 Freight

**Notes:** The building floor plan is shown in a simplified manner. The building floor plan is shown in a simplified manner. The building floor plan is shown in a simplified manner.

**Project Scorecard**

Compatibility: 88%

Score: 617,440

Notes: 7,137,463

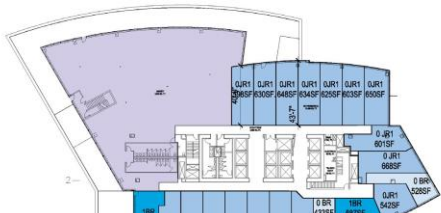
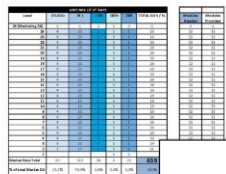
Comments: 7,137,463

Feedback: 7,137,463

**Gensler**

## FLOOR 2

GROSS: 27,713 SQ. FT.  
DEDUCTION: 5,699 SQ. FT.  
NET RES: 12,469 SQ. FT.  
EFFICIENCY: 79.4% incl amenity



## FLOOR 3-25

GROSS: 22,970 SQ. FT.  
DEDUCTION: 5,563 SQ. FT.  
NET RES: 17,406 SQ. FT.  
EFFICIENCY: 75.7%

12' WIDE MODULE= 38 MODULES PER FLR  
18 SHADOW BOXES REQUIRED  
DEAD END CORRIDOR 50'

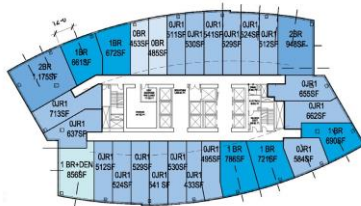
STUDIO: 2  
0 JUNIOR 1: 18  
1 BEDROOM: 5  
1 BEDROOM + DEN: 1  
2 BEDROOM: 2

---

TOTAL: 28 UNITS

INITIAL ASSUMPTIONS:  
STUDIOS: 425-500 SF  
0 JUNIOR 1: 500-650 SF  
1 BEDROOM: 675-775SF  
1 BEDROOM + DEN: 800-850 SF  
2 BEDROOM: 900-1000SF

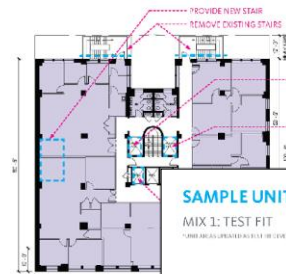
**TOTAL 636 UNITS**



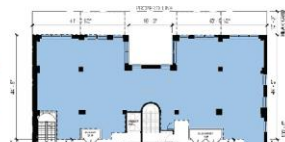
Gensler 7

## OFFICE VS RESIDENTIAL

EXISTING



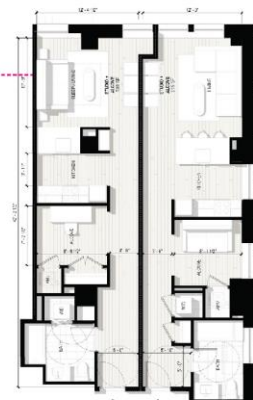
## PROPOSED



## SAMPLE UNITS

MIX 1: TEST FIT

© 1998 John Wiley & Sons, Inc. CCC 0890-6964/98/010000-12



JR 1:598 SF

JR 1:615 SF

16  
Gersl

# THE TAKEAWAYS

Gensler

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Office-to-resi conversions are feasible under the right circumstances

---

Conversions could be one important step in addressing housing supply shortages

---

Feasibility (and success) of any conversion policy will require a thoughtful balance of zoning amendments, incentives, and affordability requirements

---

In New York, it will required close coordination of city and state policies

---

Adaptive reuse strategies can have sustainability advantages vs. tearing down and building new

---

Potential impact at both a building, neighborhood and city-wide level

# CASE STUDIES

Gensler



Franklin Tower



160 Water Street



# FRANKLIN TOWER | PHILADELPHIA, PA



Gensler

30th St Station

Philadelphia 30th Street

Kimmel Center

15-16th and Locust

Walnut Locust  
Station - BSL

15th St Station - MFL M

Suburban

JFK Plaza

RITTENHOUSE  
SQUARE

CENTER  
CITY WEST

Mutter Museum

LOGAN SQUARE

one franklin plaza

The Franklin Institute

Free Library of  
Philadelphia

Philadelphia  
Pennsylvania Temple

College of Nursing  
and Health Professions

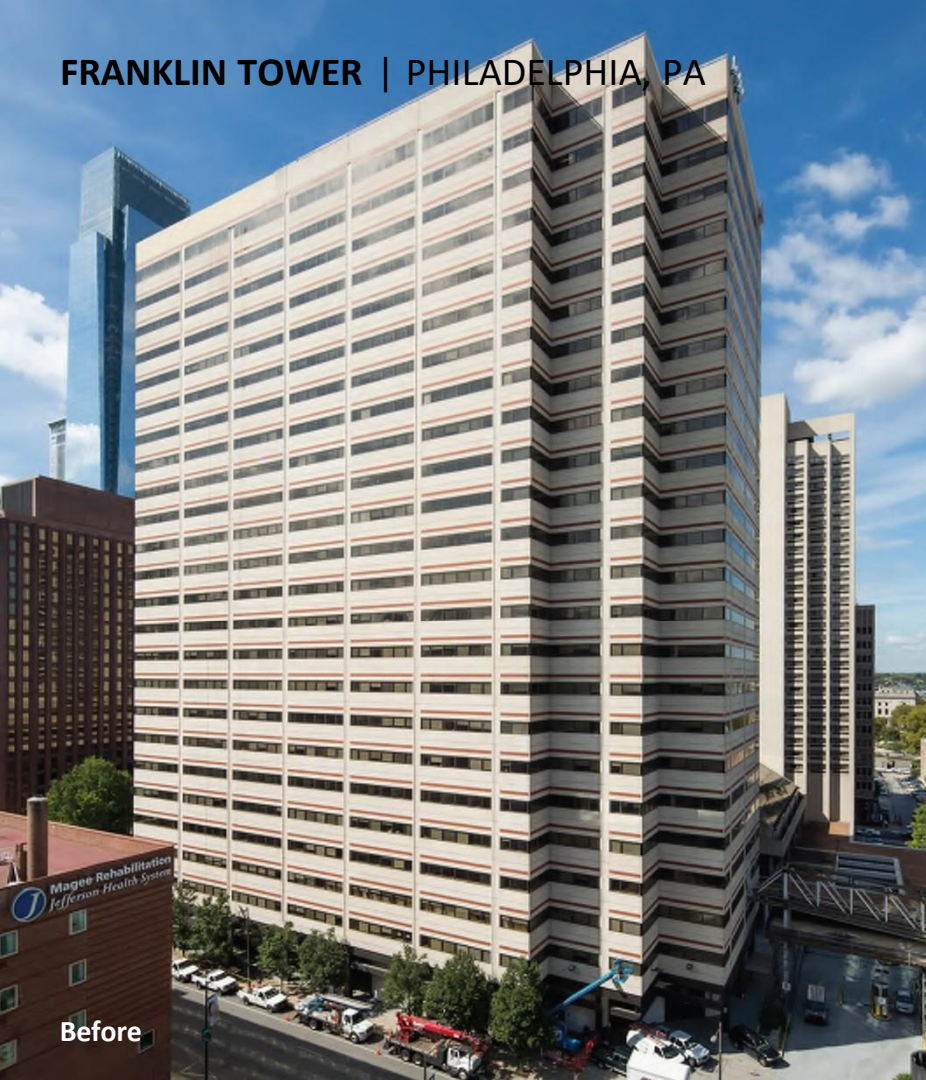
Race Vine Station - BSL M

Pennsylvania  
Convention Center



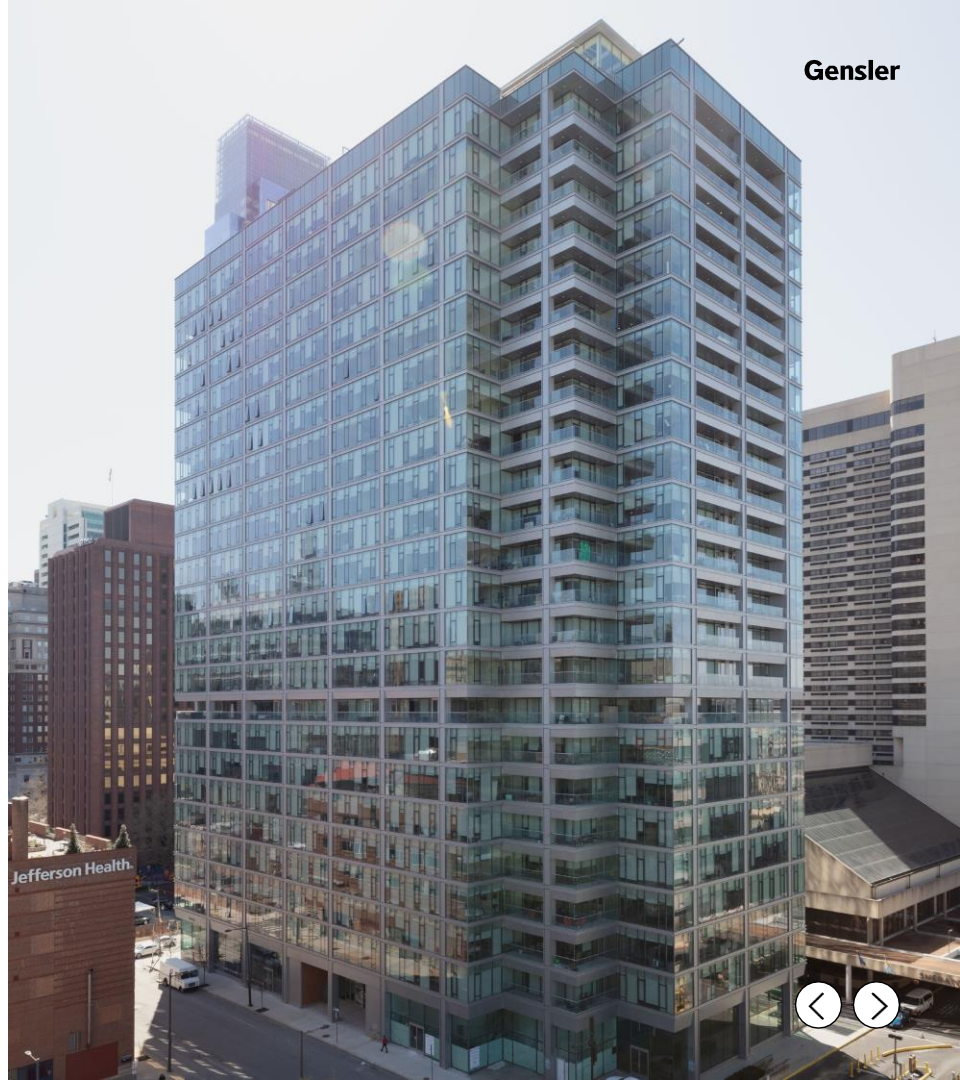


# FRANKLIN TOWER | PHILADELPHIA, PA



Before

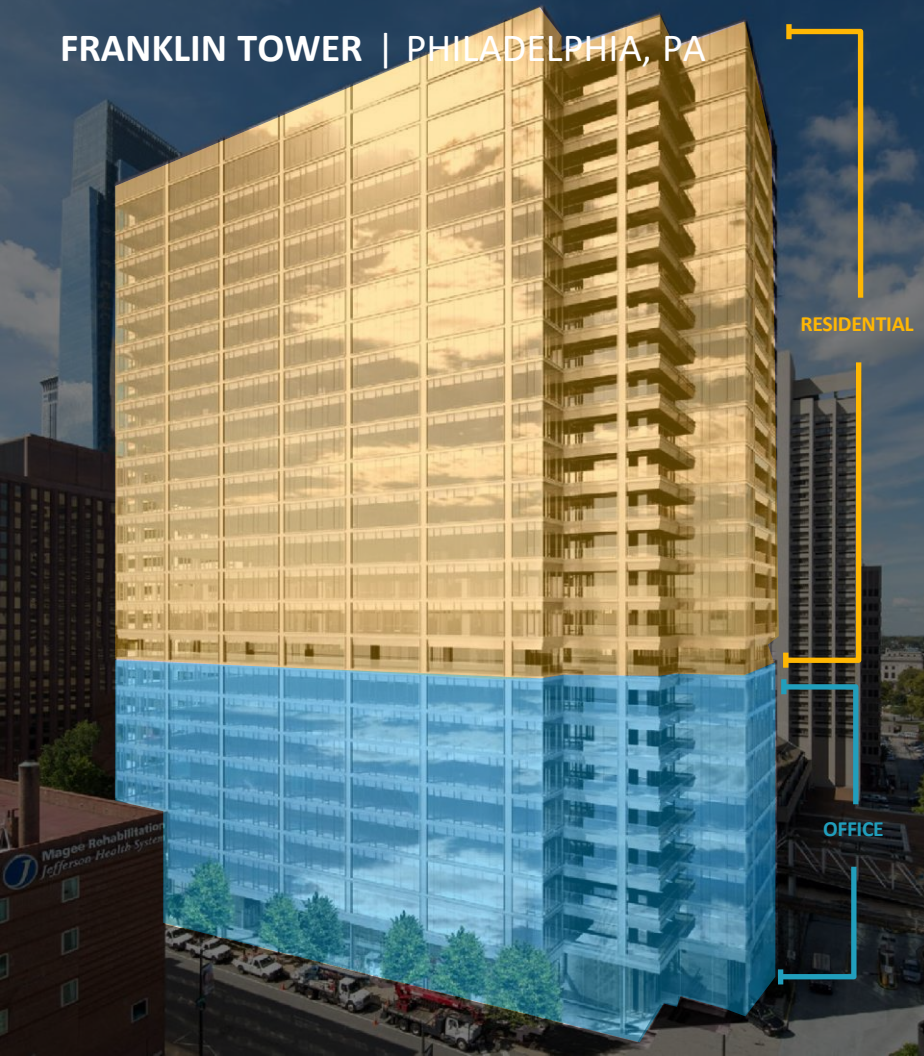
Gensler



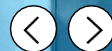
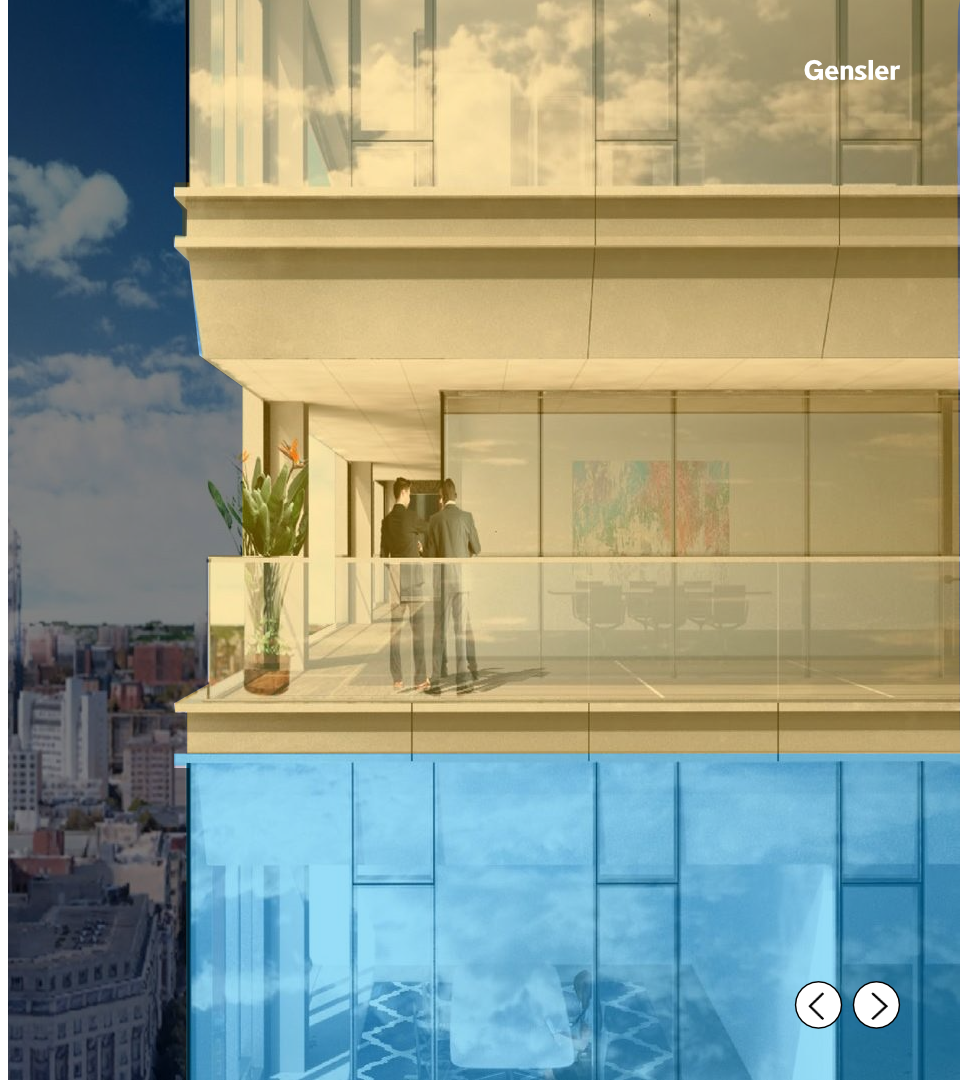
Jefferson Health



# FRANKLIN TOWER | PHILADELPHIA, PA



Gensler

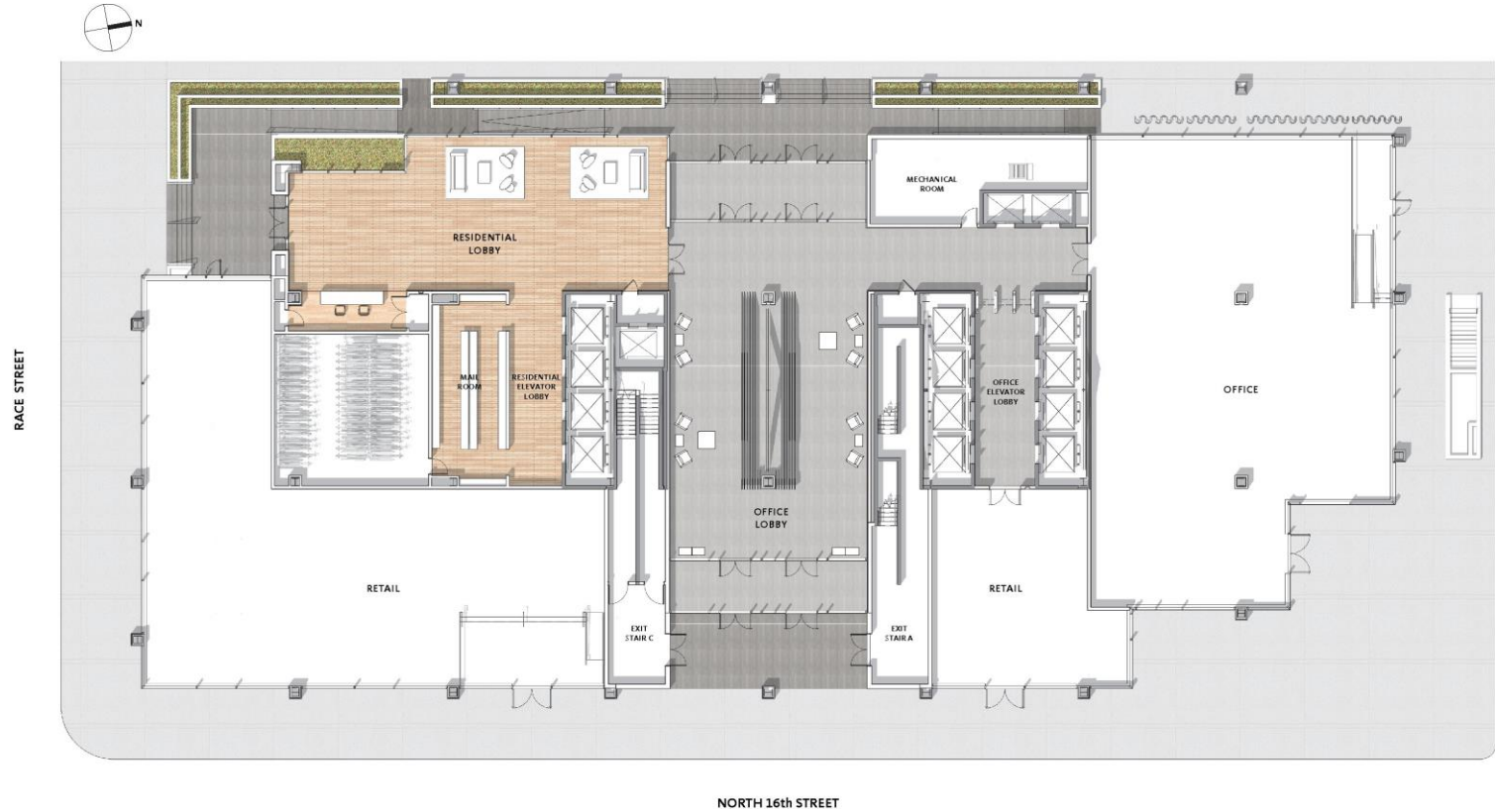


# FRANKLIN TOWER | PHILADELPHIA, PA

Gensler

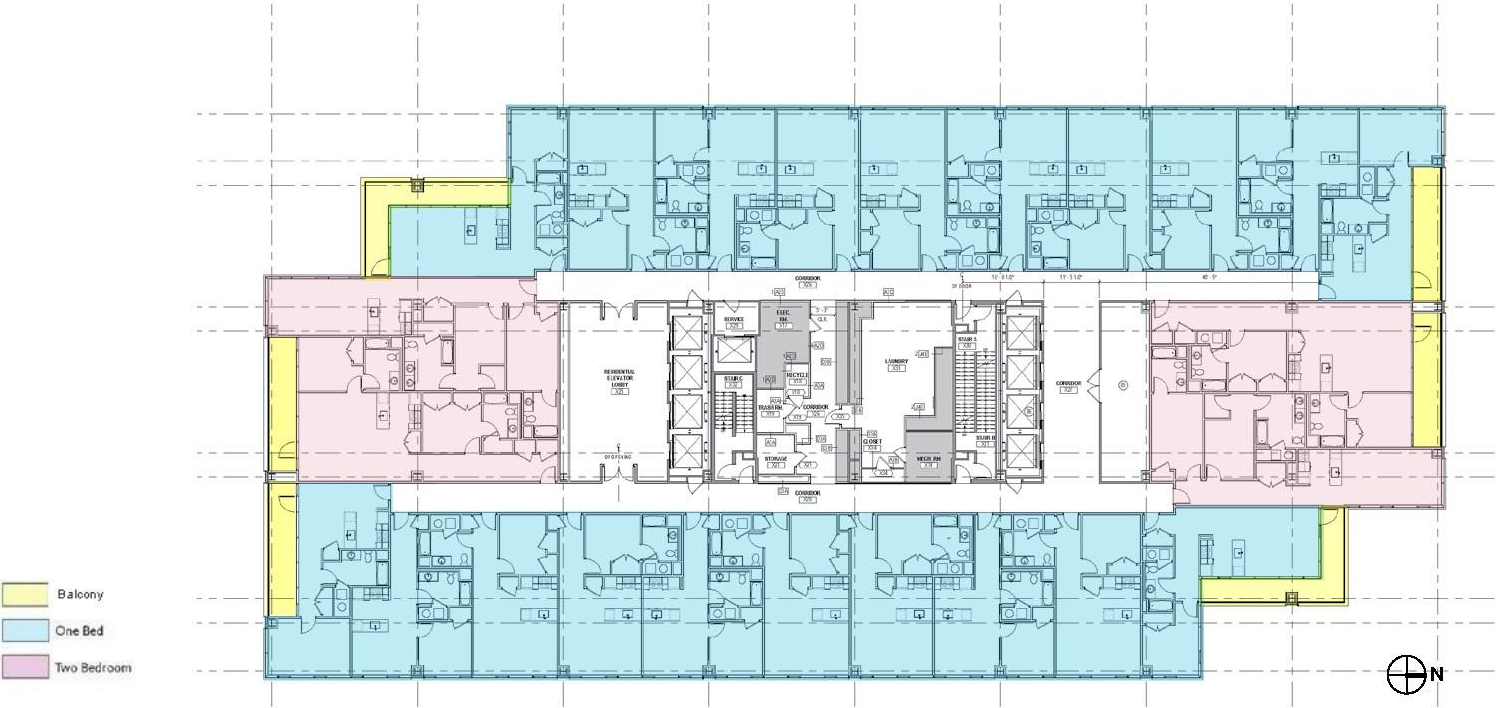






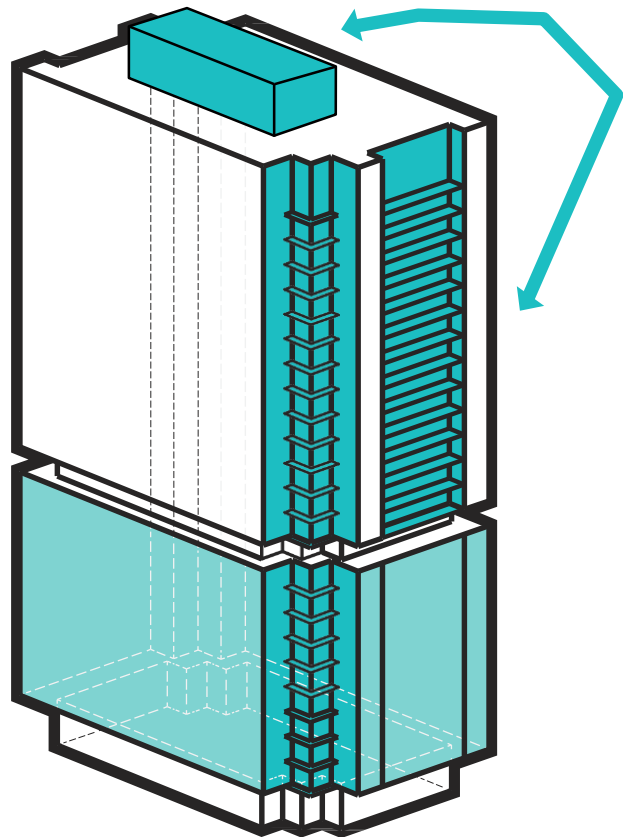
Ground Floor Plan





Typical Unit Floor Plan

# FRANKLIN TOWER | PHILADELPHIA, PA



Gensler





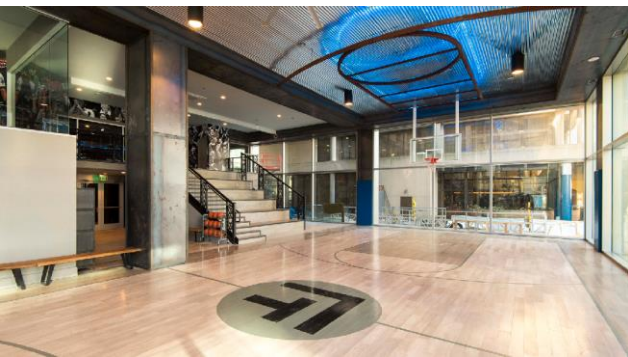




Typical Unit Floor Plan



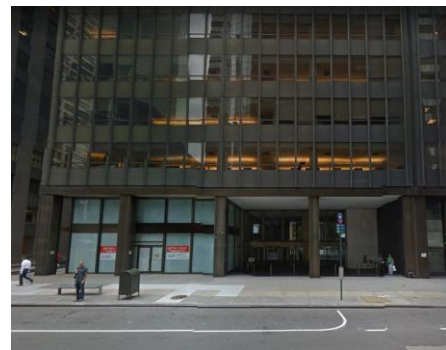




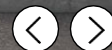


# 160 WATER STREET | NEW YORK, NY

Gensler



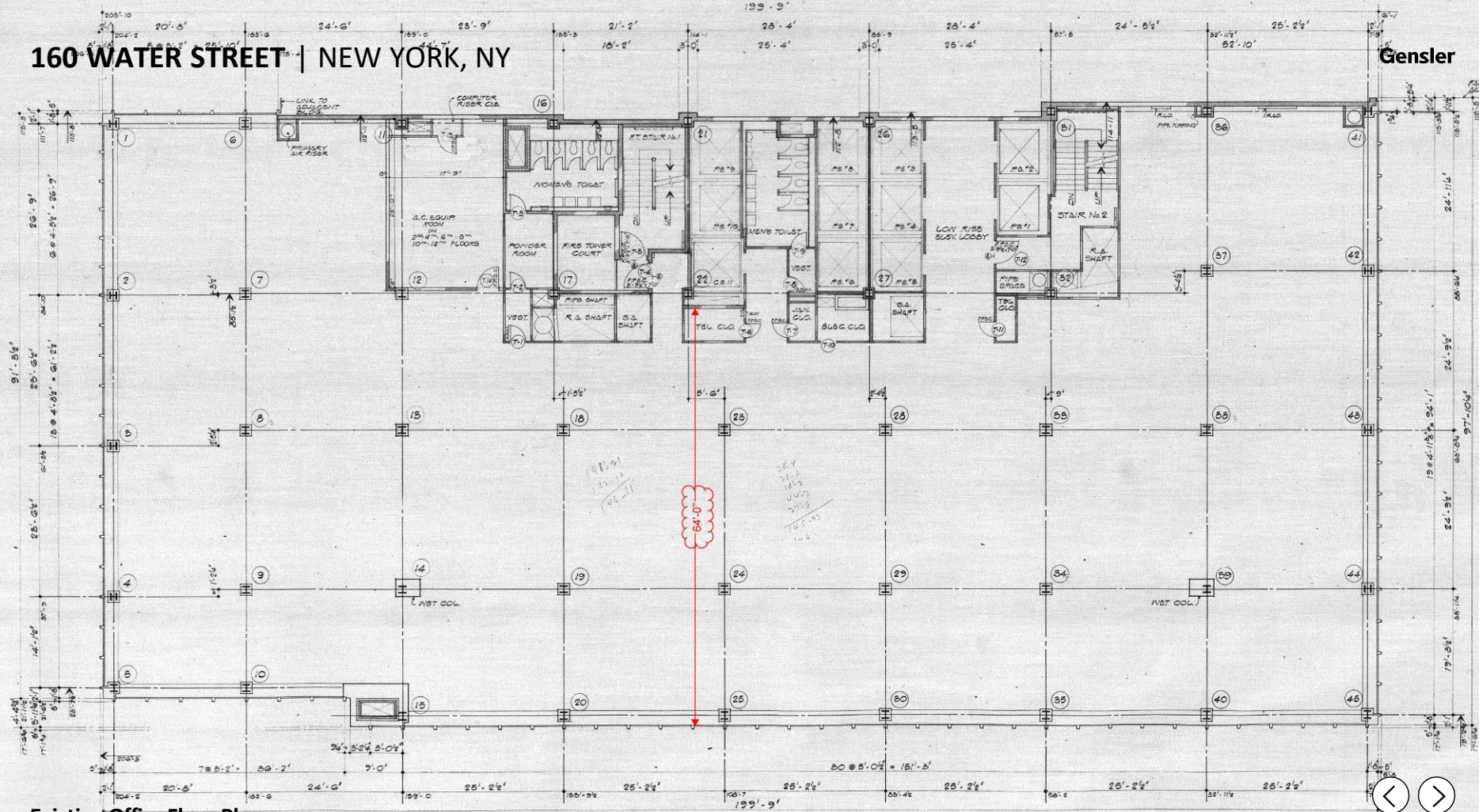
Before





## Existing Office Floor Plan

FACE OF  
ALUM. PL.

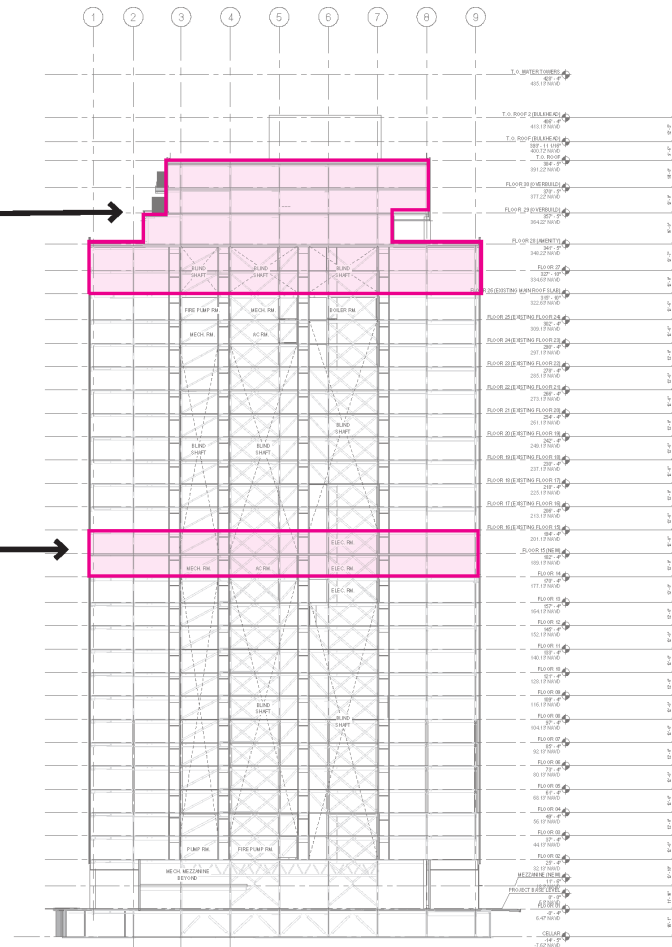
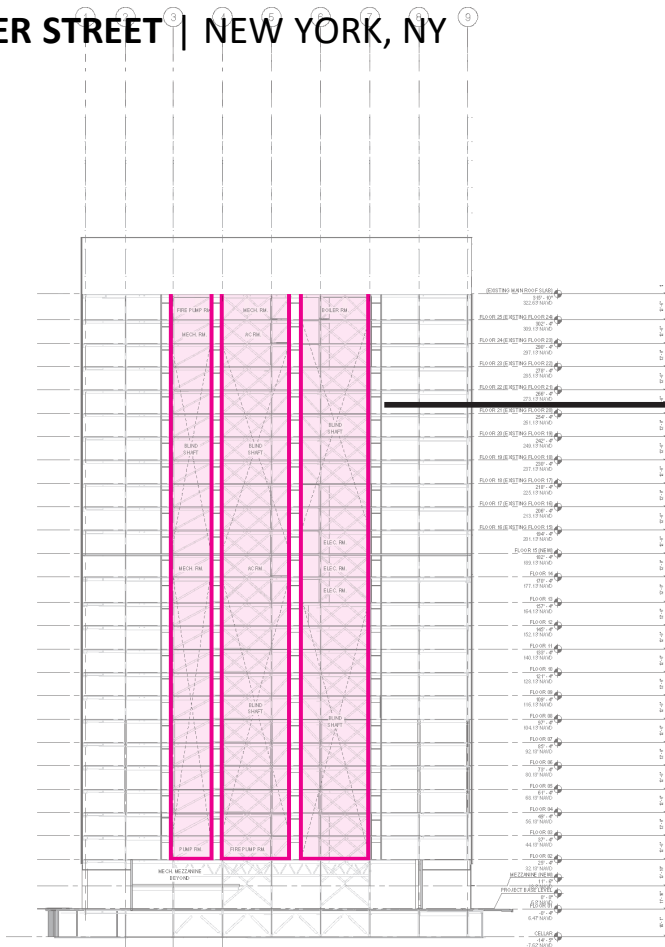






160 WATER STREET | NEW YORK, NY

# Gensler



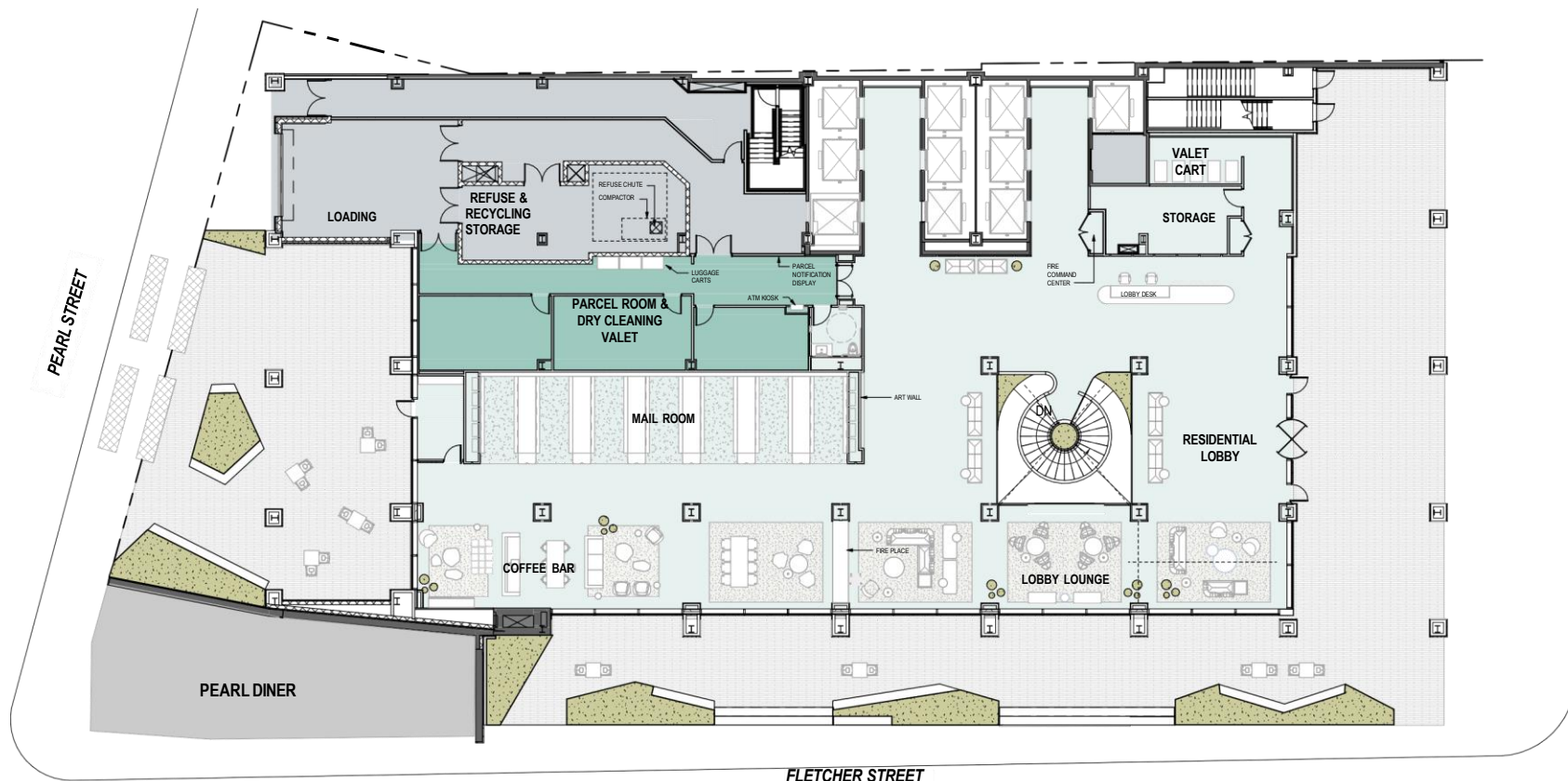
## ZFA Harvesting

## BLIND SHAFTS

INFILL/OVERBUILD



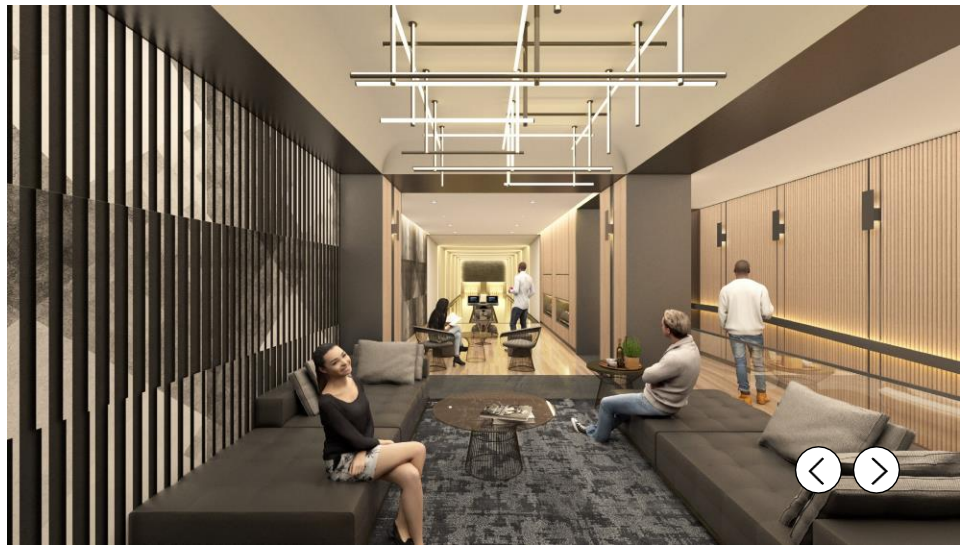


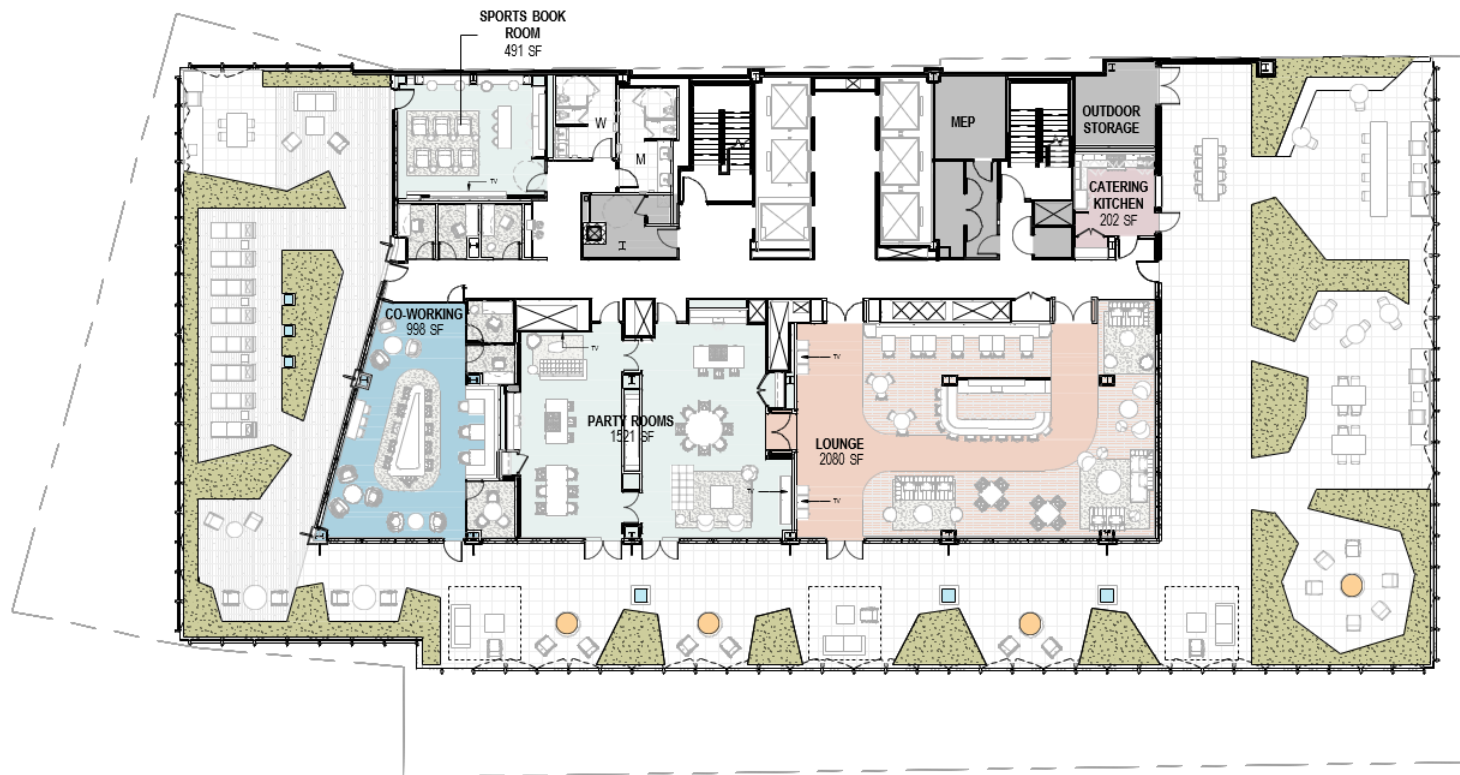


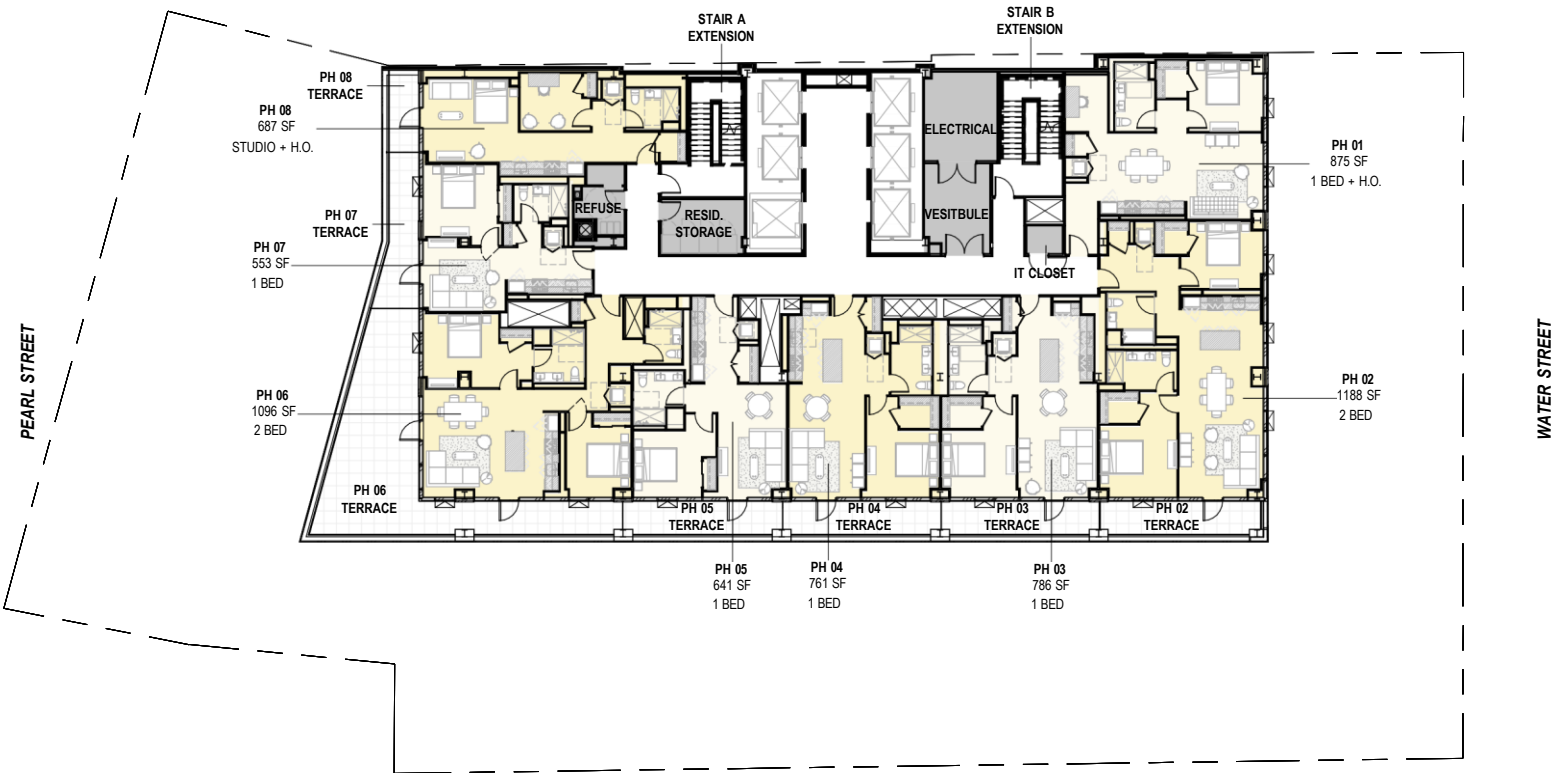




# 160 WATER STREET | NEW YORK, NY







Penthouse Unit Plan



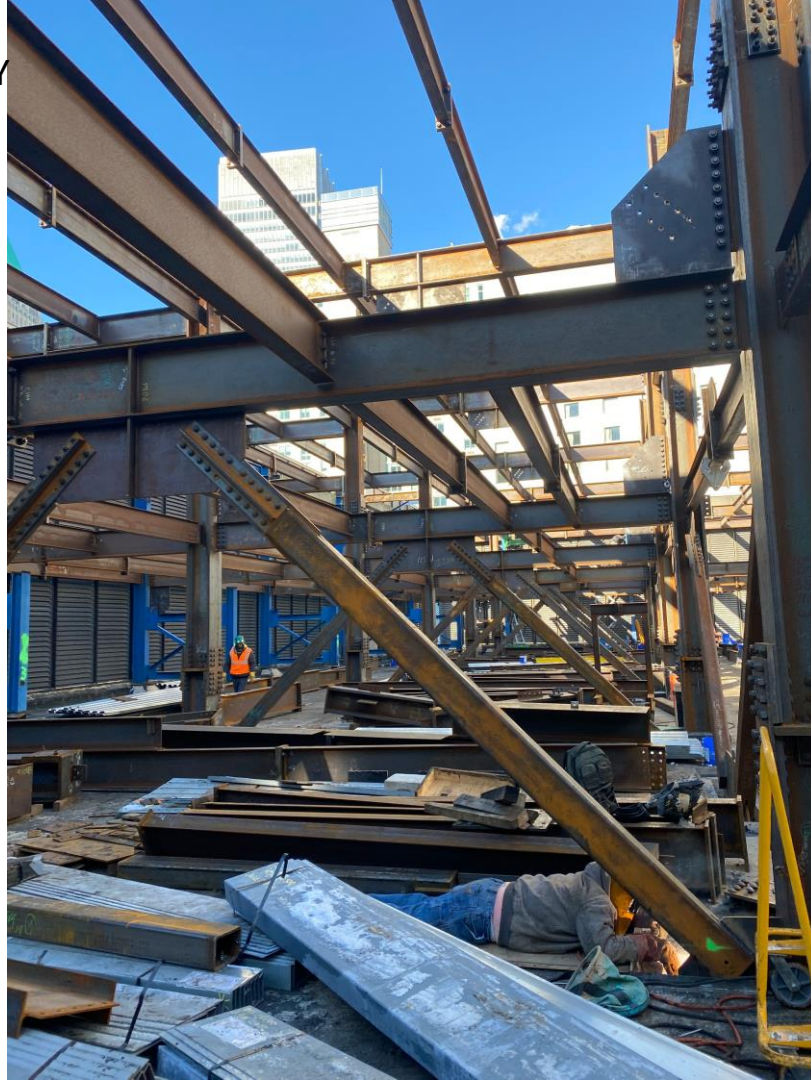
# 160 WATER STREET | NEW YORK, NY



Penthouse Overbuild







# 160 WATER STREET | NEW YORK, NY







Façade Existing



Façade Construction Progress

# Smart Tools for Efficient HVAC Performance (STEP) Campaign



Scan this QR code to visit our website

Contact: [christian.valoria@pnnl.gov](mailto:christian.valoria@pnnl.gov)

The STEP Campaign aims to increase adoption of **smart diagnostic tools** to streamline HVAC system performance testing and troubleshooting, **reducing energy-wasting faults** and **improving occupant comfort**.

**To join the STEP Campaign, visit: [bit.ly/3DFmEaE](https://bit.ly/3DFmEaE)**



## HVAC Contractors and Technicians

- Reduce callbacks, improve consistency and quality, streamline processes
- Find out where to get training on smart diagnostic tools
- Be recognized for successful adoption of smart diagnostic tools!



## HVAC Training Organizations

- Offer qualified training on System Performance with smart diagnostic tools
- Promote your training events
- Be recognized for providing training!



## Utilities and Program Implementers

- Streamline quality installation and quality maintenance programs
- Improve engagement with your contractors
- Be recognized for programs that utilize smart diagnostic tools!



## Weatherization Organizations

- Ensure your ASHP/CAC installations are operating at optimized efficiency
- Develop pilot with PNNL team
- Be recognized!

## ORGANIZING PARTNERS



# Explore the Residential Program Guide

Resources to help improve your program and reach energy efficiency targets:

- [Handbooks](#) - explain *why* and *how* to implement specific stages of a program.
- [Quick Answers](#) - provide answers and resources for common questions.
- [Proven Practices](#) posts - include lessons learned, examples, and helpful tips from successful programs.
- [Technology Solutions](#) **NEW!** - present resources on advanced technologies, **HVAC & Heat Pump Water Heaters**, including installation guidance, marketing strategies, & potential savings.
- [Health + Home Performance Infographic](#) – spark homeowner conversations.



<https://rpssc.energy.gov>

# Health + Home Performance Infographic



DOE’s Health + Home Performance Infographic reveals the link between efficiency and health – something everyone cares about. Efficiency programs and contractors can use the question-and-answer format to discover a homeowner’s needs.

The infographic is ideal for the “kitchen table” conversations where people decide what to do – and who they want to do it. It also has links for homeowners to find a qualified contractor if they do not already have one.

[Download](#) this infographic from DOE’s Better Buildings Residential Network.

Looking for photos to help tell your energy efficiency story? Visit our image libraries:  
<https://www.energy.gov/eere/better-buildings-residential-network/articles/image-libraries>

# Thank You!

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Please send any follow-up questions  
or future call topic ideas to:  
[bbresidentialnetwork@ee.doe.gov](mailto:bbresidentialnetwork@ee.doe.gov)